

CLAIMS

What is claimed is:

1. A method for writing position information to a rotatable storage medium, comprising:
 - 5 writing a first servo burst during a first pass of a write element over a rotatable medium, the rotatable medium having an inner diameter and an outer diameter;
 - 10 trimming the first servo burst during a second pass of the write element;
 - 15 writing a second servo burst during a third pass of the write element; and
 - 20 writing at least one additional servo burst during at least one subsequent pass of the write element, the number of additional servo bursts being dependent upon the location of the additional servo bursts relative to at least one of the inner diameter and outer diameter, wherein the first servo burst, second servo burst, and each additional servo burst each have an edge that can be used to determine the position during a subsequent pass over those servo bursts.
 - 25 2. A method according to claim 1, wherein:
 - the first servo burst has a trimmed edge defining a first portion of a burst boundary, and the second and each additional servo burst have a written edge, the written edges defining a second portion of the burst boundary.
 - 30 3. A method according to claim 2, further comprising:
 - using the trimmed edge of the first servo burst and the written edges of the second and each additional servo burst to determine the position of the write element.
 - 35 4. A method according to claim 1, wherein:

the width of the first servo burst after trimming is approximately the width of a track of servo data.

5. A method according to claim 1, wherein:

5 an additional servo burst is only written if the transition defined by the first and second servo bursts determines the position of a data track centerline.

6. A method according to claim 1, wherein:

10 an additional servo burst is only written if the transition defined by the first and second servo bursts is near the outer diameter.

7. A method according to claim 1, wherein:

15 the first, second, and each additional servo burst are contained in a servo wedge on the rotatable medium.

8. A method according to claim 1, wherein:

at least one subsequent pass occurs before the second pass.

20 9. A method for writing position information to a rotatable storage medium, comprising:

writing a first servo burst during a first pass of a write element over a rotating medium, the rotating medium having an inner diameter and an outer diameter;

25 trimming the first servo burst during a second pass of the write element;

writing a second servo burst during a third pass of the write element wherein the first servo burst and second servo burst each have an edge forming a burst transition that can be used to determine the position of the write element during a subsequent pass over those burst patterns; and

30 writing at least one additional servo burst during at least one

subsequent pass of the write element if the burst transition defines the position of a data track centerline, the number of additional servo bursts being dependent upon the location of the additional servo bursts relative to at least one of the inner diameter and outer diameter.

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10. A method according to claim 9, wherein:

the trimming of the first servo burst during the second pass trims less than all of the first servo burst.

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11. A method according to claim 10, further comprising:

using a fourth pass to trim that portion of the first servo burst that was not trimmed during the second pass.

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12. A method for writing position information to a rotating medium, comprising:

writing at least a portion of a first burst pattern during a first pass of a write element over a rotating medium, the rotating medium having an inner diameter and an outer diameter;

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trimming at least a portion of a first burst pattern during a second pass of the write element;

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writing at least a portion of a second burst pattern during a third pass of the write element, wherein the first burst pattern and second burst pattern each have an edge defining a burst transition that can be used to determine the position of the write element during a subsequent pass over those patterns;

determining the position of the first and second servo bursts relative to at least one of the inner diameter and outer diameter; and

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using the position to determine a number of additional servo bursts to be written and writing those servo bursts during at least one subsequent pass of the write element, wherein the third burst pattern is also used to define the burst transition.

13. A method according to claim 12, wherein:
the writing of additional servo bursts occurs if the transition defines
the position of a track centerline.

5 14. A method according to claim 12, wherein:
number of additional servo bursts increases toward the outer
diameter.

15. A method for manufacturing a hard disk drive, comprising:
10 providing means for writing a first servo burst during a first pass of
a write element over a rotatable medium, the rotatable medium having an
inner diameter and an outer diameter;
providing means for trimming the first servo burst during a second
pass of the write element;
15 providing means for writing a second servo burst during a third pass
of the write element; and
providing means for writing at least one additional servo burst during
at least one subsequent pass of the write element, the number of
additional servo bursts being dependent upon the location of the additional
20 servo bursts relative to at least one of the inner diameter and outer
diameter, wherein the first servo burst, second servo burst, and each
additional servo burst each have an edge that can be used to determine
the position during a subsequent pass over those servo bursts.

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